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Amendments to the Claims

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently amended) The method according to claim ~~5~~ 12, wherein each gain setting for said imaging system is applied for the duration of a single frame.

7. (Cancelled)

8. (Cancelled).

9. The method according to claim ~~7~~ 12 wherein the analog (VGA) gain has maximum and minimum analog gain values.

10. The method according to claim ~~7~~12 wherein a chip gain has a maximum and a minimum gain value.

11. The method according to claim ~~7~~12 wherein the digital gain has a maximum and a minimum value.

12. (Currently amended) A method of gain control in an imaging system having a shutter, a digital gain circuit, and a CDS/VGA circuit, including:

determining a total gain for an imaging system;

receiving, by an automatic gain control (AGC) circuit having a gain splitter circuit, the determined total gain;

splitting, by the gain splitter circuit, the determined total gain into distributed gain values which at least include a shutter gain, an analog (VGA) gain, and a digital gain; and

determining the level of the shutter gain to be applied in the operation of the imaging system;

determining the level of the analog (VGA) gain to be applied in the operation of the imaging system;

determining the level of the digital gain to be applied in the operation of the imaging system;

hierarchically adjusting the shutter gain, the analog (VGA) gain, and the digital gain; and

wherein the shutter gain has maximum and minimum shutter gain values; and

~~The method according to claim 8~~ wherein the analog (VGA) gain and the digital gain remain at a constant level as the shutter gain is varied.

13. (Currently amended) A method of gain control in an imaging system having a shutter, a digital gain circuit, and a CDS/VGA circuit, including:

determining a total gain for an imaging system;

receiving, by an automatic gain control (AGC) circuit having a gain splitter circuit, the determined total gain;

splitting, by the gain splitter circuit, the determined total gain into distributed gain values which at least include a shutter gain, an analog (VGA) gain, and a digital gain; and

determining the level of the shutter gain to be applied in the operation of the imaging system;

determining the level of the analog (VGA) gain to be applied in the operation of the imaging system;

determining the level of the digital gain to be applied in the operation of the imaging system;

hierarchically adjusting the shutter gain, the analog (VGA) gain, and the digital gain; and

wherein the shutter gain has maximum and minimum shutter gain values; and

~~The method according to claim 8~~ wherein the shutter gain and the analog (VGA) gain remain at a constant level as the digital gain is varied.

14. (Currently amended) A method of gain control in an imaging system having a shutter, a digital gain circuit, and a CDS/VGA circuit, including:

determining a total gain for an imaging system;

receiving, by an automatic gain control (AGC) circuit having a gain splitter circuit, the determined total gain;

splitting, by the gain splitter circuit, the determined total gain into distributed gain values which at least include a shutter gain, an analog (VGA) gain, and a digital gain; and

determining the level of the shutter gain to be applied in the operation of the imaging system;

determining the level of the analog (VGA) gain to be applied in the operation of the imaging system;

determining the level of the digital gain to be applied in the operation of the imaging system;

hierarchically adjusting the shutter gain, the analog (VGA) gain, and the digital gain; and

wherein the shutter gain has maximum and minimum shutter gain values; and

~~The method according to claim 8~~ wherein the shutter gain and the digital gain remain at a constant level as the analog (VGA) gain is varied.

Claims 15 through 34 (Cancelled).

35. (Original) The method according to claim 12, wherein said constant level is user-settable.

36. (Original) The method according to claim 13, wherein said constant level is user-settable.

37. (Original) The method according to claim 14, wherein said constant level is user-settable.

38. (Cancelled)

39. (New) The method according to claim 13, wherein each gain setting for said imaging system is applied for the duration of a single frame.

40. (New) The method according to claim 13 wherein the analog (VGA) gain has maximum and minimum analog gain values.

41. (New) The method according to claim 13 wherein a chip gain has a maximum and a minimum gain value.

42. (New) The method according to claim 13 wherein the digital gain has a maximum and a minimum value.

43. (New) The method according to claim 14, wherein each gain setting for said imaging system is applied for the duration of a single frame.

44. (New) The method according to claim 14 wherein the analog (VGA) gain has maximum and minimum analog gain values.

45. (New) The method according to claim 14 wherein a chip gain has a maximum and a

minimum gain value.

46. (New) The method according to claim 14 wherein the digital gain has a maximum and a minimum value.